

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-4, 7-27 are presently active. Claims 1, 11, and 26 have been presently amended. Claims 5 and 6 were previously canceled without prejudice. Claims 13-25 and 27 have been presently canceled without prejudice. No new matter has been added.¹

In the outstanding Office Action, Claims 1 - 4, 7-12 and 26 were rejected under 35 U.S.C. §103(a) as being unpatentable over Jodai et al (Japanese Patent No. 11-195635).

Applicant acknowledges with appreciation the courtesy of Examiner Rigglesman to interview this case with Applicant's representative on February 20, 2008 during which time the issues in the outstanding Office Action were discussed as substantially described hereinafter.

Claim Summary: Claim 1 as clarified by the present amendment and consistent with that discussed during the interview defines:

A rinse solution nozzle assembly for dispensing a rinse solution on a substrate, comprising:

a first nozzle array including one nozzle disposed on a central axis extending normally from a center of the substrate, and configured to dispense said rinse solution substantially near the center of said substrate;

a first control valve coupled to said first nozzle array and configured to actuate a first flow rate of said rinse solution through said first nozzle array;

a second nozzle array including a plurality of nozzles, said nozzles arranged at fixed positions along a radial span aligned with the central axis and extending from near center of the substrate toward a perimeter of the substrate and configured to dispense said rinse solution across the radial span on a side of the substrate facing the first nozzle array;

a second control valve coupled to said second nozzle array and configured to actuate a second flow rate of said rinse solution through said second nozzle array; and

a fluid supply line ***connecting a rinse solution supply to both the first control valve and the second control valve*** and supplying the rinse solution both to the first control valve and to the second control valve ***for supply of the same rinse solution to both the first nozzle array and the second nozzle array.***

Accordingly, as claimed, the same rinse fluid is supplied by the claimed fluid supply line to both the first control valve and the second control valve in order for the same rinse fluid to be supplied both to the first nozzle array and the second nozzle array.

Regarding the outstanding U.S.C. § 103(a) rejection, the Office Action acknowledges on page 3 that Jodai et al describe “the use of water injection from the first nozzle array and a gas through the second nozzle array.” The Office Action thereafter contends that Applicant has not established on this record any structural distinction between apparatus within the scope of the rejected claims and the apparatus fairly described by Jodai et al. The Office Action thereafter notes that “to claim that the fluid supply line is connected to both nozzle array does not necessitate that the nozzles are being injected with the same fluid.”

In an effort to expedite prosecution of this application, the independent claims have been clarified to define that the fluid supply line connects ***a rinse solution supply to both the first control valve and the second control valve***. The specification on pages 9-10, at numbered paragraphs [0036] - [0038], identified element 460 as a rinse solution supply system, and Applicant’s Figure 4 (reproduced below) illustratively shows one embodiment having this configuration where a fluid supply line connects rinse solution supply system 460 to both control valve 434 and control valve 444.

¹ See Applicant’s Figures 3 and 4 and numbered paragraph [0031] of the filed specification.

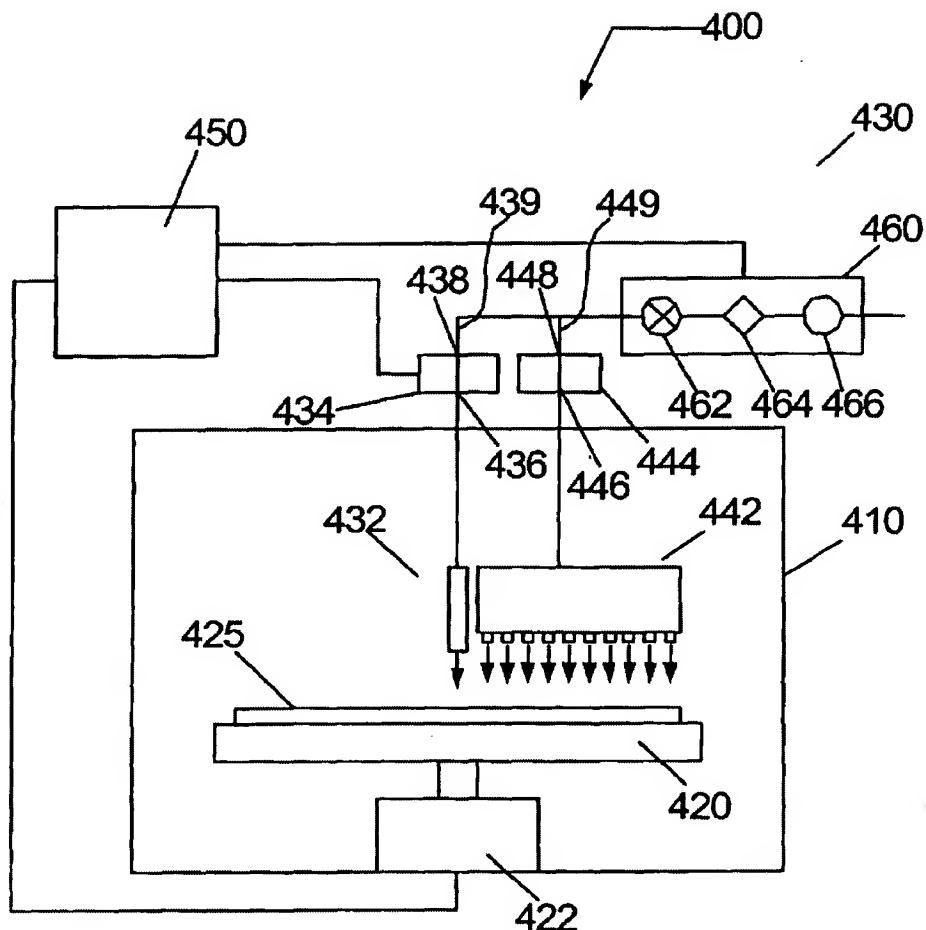


FIG. 4

M.P.E.P. § 2143 indicates in one of the illustrative rationale examples for non-obviousness (i.e., combining prior art elements which is the one rationale which seems the closest to that which the examiner is applying) that a finding that the prior art included each element claimed has to be made.

Applicant respectfully submits that the feature of a fluid supply line *connecting a rinse solution supply to both the first control valve and the second control valve* and supplying the rinse solution both to the first control valve and to the second control valve *for supply of the same rinse solution to both the first nozzle array and the second nozzle array* is a feature not taught or suggested in Jodai et al.

As discussed during the interview, Jodai et al's use of nitrogen as a drying gas for blow pipe 7 and Jodai et al's use of water for the central injection nozzle 5 are indicative of Jodai et al's having separate supply lines performing separate, sequential functions (i.e., rinsing then drying). The examiner will appreciate that one of ordinary skill in the art at the time of the invention would have no rationale or motivation to use a rinse solution supply line for both the nitrogen source and the water source in Jodai et al. Indeed, if such a rinse solution supply (i.e., the water supply in Jodai et al) were supplied to both the injection nozzle 5 and the blow pipe 7, then especially blow pipe 7 of Jodai et al would be water-contaminated, and become unsuitable for a drying a wafer.

Viewed differently, the purpose of Jodai et al is to have available both a water supply for rinsing a wafer from blow pipe 7 and a nitrogen supply from injection nozzle 5 for drying the wafer after the rinse. To modify Jodai et al so as to have a rinse solution supply connected to both injection nozzle 5 and blow pipe 7 renders Jodai et al unsatisfactory for its intended purpose of both rinsing and drying, and thus is one indicia of non-obviousness under M.P.E.P. § 2143.01 V.

Finally, Applicant respectfully points out that Jodai et al's teaching of water dispensing from injection nozzle 5 and nitrogen gas dispensing from blow pipe 7 ***teach away*** from the claimed invention, which clearly defines structures by which the same rinse solution is applied to both of the claimed first and second nozzle arrays.

The Court in *In re Gurley*, 27 F.3d 551, 553, 31 USPQ2d 1130, 1131 (Fed. Cir. 1994) stated that:

A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or ***would be led in a direction divergent from the path that was taken by the applicant***. The degree of teaching away will of course depend on the particular facts; in general, a reference will teach away if it suggests that the line of development flowing from the reference's disclosure is unlikely to be productive of the result sought by the applicant. [Emphasis added.]

Applicant thus submits a person of ordinary skill, upon reading Jodai et al, would be led in a direction divergent from the path that was taken by the Applicant. Hence, Jodai et al teaches away from the rinse solution nozzle assembly of Claim 1.

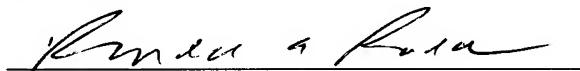
Accordingly, for all these reasons, independent Claim 1 and independent Claims 11 and 26 (which define similar features) are believed to patentably define over the art of record.

Thus, Claims 1, 11, and 26 (and the claims dependent therefrom) are in a condition for allowance and should be allowed.

Consequently, in view of the present amendment and in light of the above discussions, the outstanding grounds for rejection are believed to have been overcome. The application as amended herewith is believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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